Amendments to the Claims:

This listing of the claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1 (Currently Amended). A method of altering gene expression in a population of human embryonic stem cells~~,~~, with a transfection efficiency greater than that obtainable by means of electroporation, comprising:

introducing a polynucleotide into the population of human embryonic stem cells by transfection in the presence of at least one transfection reagent selected from the group consisting of a cationic non-lipid polymer reagent, a non-liposomal reagent, and a cationic lipid agent, wherein said polynucleotide is

~~(i)~~ operably linked to a promoter and contains a gene expression altering sequence so that gene expression in the embryonic stem cells prior to introducing the polynucleotide is measurably different from gene expression after introducing the polynucleotide while retaining the pluripotent character of the cells, wherein the transfection efficiency is greater than that obtainable by electroporation, and wherein the nucleic acid introduced into the human embryonic stem cells does not contain viral genes.~~, and~~

~~(ii) introduced into said cell population by transfection in the presence of at least one transfection reagent selected from the group consisting of a cationic non-lipid polymer reagent, a non-liposomal reagent, and a cationic lipid agent.~~

2 (Previously Presented). The method according to claim 1, wherein the expression altering sequence is an enhancer sequence for modulating gene expression in the population of embryonic stem cells.

3 (Previously Presented). The method according to claim 1, wherein the expression altering sequence is a gene encoding a protein and said protein is not expressed in the population of embryonic stem cells in the absence of the polynucleotide.

4 (Currently Amended). The method according to claim 3, wherein the protein is selected from the group consisting of a fluorescent protein and an antibiotic resistance protein.

5 (Currently Amended). The method according to claim 4, wherein the fluorescent protein is selected from the group consisting of green fluorescent protein, lacZ, firefly Rennila protein, luciferase, red cyan protein and yellow cyan protein.

6 (Currently Amended). The method according to claim 4, wherein the antibiotic resistance protein is selected from the group consisting of hygromycin, neomycin, zeocin and puromycin.

7 (Currently Amended). The method according to claim 1, wherein ~~the polynucleotide is formulated with~~ said transfection reagent is a cationic non-lipid polymer transfection reagent ~~for introducing the polynucleotide into the population of cells~~.

8 (Currently Amended). The method according to claim 1, wherein ~~the polynucleotide is formulated with~~ said transfection reagent is a non-liposomal transfection reagent ~~for introducing the polynucleotide into the population of cells~~.

9 (Currently Amended). The method according to claim 1, wherein ~~the polynucleotide is formulated with~~said transfection reagent is a cationic lipid reagent ~~for introducing the polynucleotide into the population of cells~~.

10 (Cancelled)

11 (Currently Amended). A method of altering gene expression in a population of human embryonic stem cells~~,~~, with a transfection efficiency greater than that obtainable by means of electroporation, comprising:

introducing a DNA sequence into the population of human embryonic stem cells by transfection in the presence of a cationic polymer agent, wherein said DNA is

~~(i)~~ operably linked to a promoter and corresponding to at least one of an enhancer and a gene so as to alter gene expression in the population of embryonic cells in an amount to permit cells containing the DNA sequence to be distinguished from cells absent the DNA sequence, wherein the transfection efficiency is greater than that obtainable by electroporation, and wherein the nucleic acid introduced into the human embryonic stem cells does not contain viral genes.~~,~~ ~~and~~

~~(ii) introduced into said cell population by transfection in the presence of a cationic polymer agent.~~

12 (Currently Amended). The method according to claim 11, wherein the DNA sequence corresponds to a gene and the gene encodes a protein selected from the group consisting of a fluorescent protein, a suicide gene, and an antibiotic resistance protein.

13 (Currently Amended). The method according to claim 11, wherein the promoter is selected from the group consisting of rex-1, oct-4, oct-6, SSEA-3, SSEA-4, TRA1-60, TR1-81, GCTM-2, alkaline phosphatase, and Hes 1 promoters.

14 (Currently Amended). The method according to claim 12, wherein the fluorescent protein is selected from the group consisting of green fluorescent protein, lacZ, firefly Rennila protein, luciferase, red cyan protein and yellow cyan protein.

15 (Currently Amended). The method according to claim 12, wherein the protein is an antibiotic resistance protein and the antibiotic resistance protein is selected from the group consisting of hygromycin, neomycin, zeocin and puromycin.

16 (Currently Amended). The method according to claim 12, wherein the DNA corresponds to a suicide gene and the suicide gene is an inducible apoptic gene or encodes a protein selected from the group consisting of herpes simplex thymidine kinase, inducible Diptheria toxin, and bacterial cytosine deaminase.

17 (Currently Amended). The method according to claim 11, wherein the DNA sequence causes a knockout of a genomic sequence, the genomic sequence being selected from the group consisting of beta 2 microglobulin, HLA-1, HLA-2 ~~or~~ and an INF receptor gene sequence.

18-35 (Cancelled)

36 (Previously Presented). A substantially pure stably transfected population of pluripotent human embryonic

stem cells, wherein said cells are modified to contain a gene expression altering sequence of DNA.

37-56 (Cancelled)

57-58 (Not Entered)

59 (Previously Presented). The method according to claim 1, further comprising selecting and verifying that the population is a substantially pure population of stably transfected pluripotent hES cell with the gene expression altering sequence.